Key Curriculum Press

Discovering Advanced Algebra: An Investigative Approach

Correlations available at www.keypress.com/kentucky. Discovering Advanced Algebra keeps students engaged as they tackle challenging topics. This text uses data analysis to model pure-algebra concepts, derive equations, solve problems, and build skills-all in a hands-on, investigative approach to learning. Real data, real-life situations, and real-world applications will help you motivate students and show them the importance of what they are learning.

Teacher Edition
Essential Items
Ancillary Items
Free with Purchase items

ISBN
9781559536066

Contract Price
$65.95

Grade
10, 11, 12

TYPE
P1

Copyright
2004

Author
Murdock, Kamischke, Kamischke

Edition
1st

Content
Algebra 2 and 3

Readability
Lexile 1160

Accessibility
Nimas

Research
Contact Alicia Hill at 800-995-6284 ext. 205

Provided by the Publisher

ISBN 9781559536066	Publisher - **Key Curriculum Press**		
Discovering Advanced Algebra: An Investigative Approach			
Type - P1	Author - Murdock, Kamischke, Kamischke		
Copyright - 2004	Edition - 1st	Readability - Lexile 1160	
Course - 270311-Algebra 2		Grade(s) - 10, 11, 12	
Teacher Edition ISBN if applicable 9781559536073			

Provided by the Publisher

Overall Recommendation: **Recommended as BASAL**

if this box is not checked, the evaluators have chosen NOT recommend as basal

Overall Strengths, Weaknesses, Comments:

The text provides activities and investigations as well as connections to other subject areas. The reading level is grade-level appropriate. There is a lack of assessment materials and lower-level questioning in the provided assessments. There is little support for ESL, students with learning difficulties, or differentiation of instruction.

NIMAC Accessibility	N	
Ancillary	No	
Free with Purchase	Yes	
Research	Yes	Contact Alicia Hill at 800-995-6284 ext. 205

Correlations available at www.keypress.com/kentucky. Discovering Advanced Algebra keeps students engaged as they tackle challenging topics. This text uses data analysis to model pure-algebra concepts, derive equations, solve problems, and build skills-all in a hands-on, investigative approach to learning. Real data, real-life situations, and real-world applications will help you motivate students and show them the importance of what they are learning.

CRITERIA

This basal resource …

A. Encompasses KY Content Standards & Grade Level Expectations	**Strong Evidence**

Text is designed to be used in an elective course outside the Program of Studies

1) Includes the 5 Big Ideas of mathematics to the following extent:	
a) Number Properties and Operations	Strong Evidence
b) Measurement	Moderate Evidence
c) Geometry	Not Applicable
d) Data Analysis and Probability	Strong Evidence
e) Algebraic Thinking	Strong Evidence
2) Addresses content-specific enduring understandings from the related Program of Studies standards.	Strong Evidence
3) Addresses content-specific skills and concepts from the related	Strong Evidence

Program of Studies standards.

4) Content addressed is current, relevant and non-trivial	Strong Evidence
5) Provides opportunities for critical thinking/reasoning	Strong Evidence

6) Strengths, Weaknesses, Comments:

- Specific strengths-which areas/concepts are covered exceptionally well?
- Specific weaknesses-which areas/concepts would likely require supplementing?

The POS and KCCT is included, but there is no correllation materials provided to the instructor or student. There are numerous activities and investigations that provide opportunities for critical thinking and reasoning.

B. Functionality & Suitability — Moderate Evidence

1) Suitability — **Moderate Evidence**

- Should be suitable for use with a diverse population and is free of bias regarding race, age, ethnicity, gender, religion, social and/or geographic environment; is free of stereotyping or bias of any kind.

2) Content quality — **Strong Evidence**

- Free from factual errors
- Content is presented conceptually when possible—more than a mere collection of facts
- Content included accurately represents the knowledge base of the discipline
- Theories/scientific models contained represent a broad consensus of the scientific community
- Interconnections among mathematical topics

3) Connections to Literacy — **Moderate Evidence**

- Employs a variety of reading levels and is grade/level appropriate
- Use of multiple representations-concrete, visual/spatial, graphs, charts, etc.
- Provides opportunities for summarizing, reviewing, and reinforcing vocabulary skills and concepts at multiple levels of difficulty for a variety of learning styles.
- Student text provides opportunity to integrate reading and writing
- Uses vocabulary that is age and content appropriate
- Focuses on critical vocabulary vs. extensive lists
- Identifies key vocabulary through definitions in both text and glossary
- The text is engaging and facilitates learning
- Embedded activities enhance the understanding of the text
  Note: may apply to either student or teacher editions

4) Connections to Technology — **Moderate Evidence**

- Integrates technology and reflects the impact of technological advances
- Uses technology in the collection and/or manipulation of authentic data
- Embeds web links as a mathematics resource.

5) Support for Diverse Learners — **Little or No Evidence**

- Provides support for ESL students
- Provides support for differentiation of instruction in diverse classrooms
- Challenge for gifted and talented students
- Support for students with learning difficulties
  Note: may apply to either student or teacher editions

---

6) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

There are connections between other math topics, science, consumer science, and other disciplines. The reading is grade level appropriate. There are lengthy written explanations that may be over-bearing for below grade-level readers. Vocabulary is included within the written paragraphs. There are screen shots for graphing calculators, but the instruction for use are found in materials not availble with standard purchase. There is little evidence of support for differentiation, ESL students, students with learning difficulties, or advanced students in the teacher edition.

C. Supports Inquiry and Skill Development — Strong Evidence

1) Promotes Inquiry, research and Application of Learning — Strong Evidence

- Provides opportunities for inquiry and research that includes activities such as gathering information, researching resources, observing, interviewing, and evaluating information, analyzing and synthesizing data and communicating findings and conclusions, formulating authentic questions to deepen and extend mathematical reasoning.
- Requires students to use higher-level cognitive skills (analysis, synthesis, evaluation, generalizing, justifying, etc.)
- Provides activities and projects for students to deepen their knowledge and cultivate and strengthen problem-solving and decision-making skills.
- Provides opportunities for application of learned concepts.
- Uses a variety of relevant charts, graphs, diagrams, number lines, and other illustrations to invite and motivate students to engage in discussion, problem solving, and other high-order thinking skills.
- Emphasizes conceptual understandings that invite students to predict, conclude, evaluate, develop and extend ideas to support reasoning.
  Note: may apply to either teacher or student edition

---

2) Skill Development — Strong Evidence

- Provides opportunities to make sense of all mathematics
- Provides opportunities to recognize, create, and extend patterns.
- Provides opportunities for critical thinking and reasoning.
- Provides opportunities to justify/prove responses.
- Provides opportunities to ask deeper questions.
- Contains embedded activities (or extensions) that emphasize use of technology for problem solving
  Note: may apply to either teacher or student edition

---

3) Strengths, Weaknesses, Comments:

Investigation and activities are provided throughout the text. They are real-life and relevant to the students. These provide applications and opportunities for higher-level thinking. At the end of the chapters there are journal prompts and performance assessments to challenge the students.

D. Supports Best Practices of Teaching and Learning **Moderate Evidence**

1) Engages Students Strong Evidence

- Includes content geared to the needs, interests, and abilities of all students
- Engages and motivates students using components such as real-life situations, simulations, experiments, and data gathering.
- Includes information and activities that assist students in seeing relevance of concepts (where appropriate) to their own lives and experiences
- Provides a variety of strategies, activities, and materials to enhance student learning at the appropriate learning levels
- Activities are truly congruent to the concepts addressed, not merely correlated
  Note: may apply to either teacher or student edition

2) Uses Assessment to Inform Instruction Moderate Evidence

- Includes multiple means of assessment as an integral part of instruction
- Provides evaluation measures in the teacher edition that supports differentiated learning activities
- Embedded assessments reflect a variety of Depth of Knowledge levels
  Note: may apply to either teacher or student edition

3) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards

Activities are interesting and engage students. Students can discover connections between math and other disciplines. There are higher-level questions, but no multiple choice or bimodal questions. There are not any mid-chapter quizzes provided.

E. Has an Organization/ Format that Supports Learning and Teaching **Moderate Evidence**

1) Organizational Quality Moderate Evidence

- Print and/or electronic materials present minimal barriers to learners, but also add encouragement for students to stretch and make further explorations.
- Presents chapters/lessons in an organized and logical sequence
- Provides clearly stated objectives for each lesson.
- Uses text features (e.g., titles, headings, subheadings, review questions, goals, objectives, space, print, type size, color) to enhance readability.
- Makes use of various forms of media (e.g., CD's, recordings, videos, cassette tapes, computer software, web-based components, interactive software, calculators, physical and virtual manipulatives) as either student or teacher resources
- Includes clear, accurate, appropriate and clearly explained illustrations and/or graphics that reinforce content standards.
- Incorporates a glossary, footnotes, recordings, pictures, and/or tests that aid pupils and teachers

in using the book effectively
- Uses grade-appropriate type size
- Included media are durable, easy to use and have technical merit
- Construction appears to be durable and able to withstand normal use

2) Essential Components (beyond student and teacher text) Little or No Evidence

- Items identified as essential components support the learning goals and concept coverage of the basal

3) Strengths, Weaknesses, Comments:
- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

Only the teacher edition has clearly stated objectives. The text is organized but is not appropriate for below grade-level readers. The text uses graphing calculators and software packages (Geometer's Sketchpad). There are no materials beyond the teacher edition and student edition.

F. Has available Ancillary/ Gratis Materials
Note: The decision whether to recommend or not recommend this resource as a basal should not be influenced by Section F

Little or No Evidence

1) Ancillary/Gratis Materials
- Coordinates teacher resources easily with student material (e.g., accompaniments included, student pages shown, instructional technology indicated).
- Are well-organized and easy to use
- Provide substantive learning opportunities and are congruent with student learning goals
- Provide opportunities for high-level thinking, assessment, and/or problem solving
- Provides opportunities for intervention.

2) Strengths, Weaknesses, Comments:
- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

There were no ancillary materials provided.